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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,881	02/07/2005	Martinus Johannes Maria Warmerdam	4662-340	4412
23117 7590 03/19/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
BADR, HAMID R				
ART UNIT		PAPER NUMBER		
1794				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/523,881

**Applicant(s)**

WARMERDAM ET AL.

**Examiner**

HAMID R. BADR

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 02/07/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 1 and 11 are indefinite because of the "mould like appearance" limitation. It is unclear what a "mould like appearance" may mean and what the significance of such an appearance may be. The "mould like appearance" fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. Claims 1, 3-6, 8-9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ang (EP 1 068 809; hereinafter R1).
6. R1 discloses an anti-mycotic composition containing natamycin (a polyene fungicide) which may be used against spoilage by mould, yeast or fungal growth (Abstract).

7. R1 discloses that the natamycin material may be used, as is, as a dry particulate anti-mycotic, or may be further processed as a dry preparation. The natamycin material may be further processed as a dry preparation by combining it with an anti-caking material to prevent powder agglomeration. Anti-caking materials suitable for this purpose may be cellulose powder, silicates, starches, clays, flours including rice flour, wheat flour, corn flour, polysaccharides, fibers and combinations thereof. (Page 4, paragraphs 27-28).

8. R1 teaches that the anti-caking material may be combined with the natamycin material at levels of from 0.001 to 99.999% of anti-caking material by weight. Most preferably the anti-caking material would be present at 0.1-10% by weight. (Page 4, paragraph 29)

9. R1 discusses that the natamycin may be applied to shredded cheese mixed with the anti-caking material. In this case the anti-caking material is serving the purposes of dispersing the natamycin and enhancing the flowability of shredded cheese. (page 4, paragraph 30). The quantity of the coating powder on the surface of the material being coated may vary depending on how the powder is applied.

10. R1 further teaches that the dry preparation of natamycin in anti-caking material may be dusted onto the perishable material using ordinary technology in the art. (Page 6, paragraph 39)

11. R1 presents data on the shelf life of shredded mozzarella cheese at refrigeration. The data indicate that the shredded cheese did not show any visible mould growth after 74 days of storage at 40F. (Page 8, Table 4)

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12. Given that R1 discloses food product which has a coating of a powder comprising antifungal compound identical to that presently claimed, it is clear that the powder inherently provide a mould like appearance as presently claimed.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2, 7, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ang (1 068 809; hereinafter R1).

15. There is no disclosure in R1 of specific amounts as presently claimed.

16. The limitation of 0.005-10g powder/dm<sup>2</sup> · 0.01-7 g powder/dm<sup>2</sup> and 0.005—10 mg natamycin/dm<sup>2</sup>(claims 2, 7, 10 and 13) may be manipulated by a person of ordinary skill in the art. Since the minimum inhibitory concentration (MIC) of natamycin is below 10 ppm for most fungi, the amount of natamycin required for prevention of spoilage can be calculated for the total weight of the material to be coated. Knowing the surface area of the material to be coated, the calculated amount of natamycin should be distributed over the surface area of the product, and since the coating powder contains a known amount of the natamycin per unit weight, the coating required on the surface of the foodstuff is readily calculated.

17. It would have been obvious to one of ordinary skill in the art to modify the teachings of R1 and choose the amounts of the antifungal compound, including that

presently claimed; to produce food that would not spoil. Absent any evidence and based on the teachings of the cited reference, there would have been a reasonable expectation of success to preserve the food by coating it with antifungal material.

18. Claims 2, 7, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ang (EP 1 068 809; hereinafter R1) in view of De Haan et al. (EP 0867 124, hereinafter R2).

19. R1 discloses an anti-mycotic composition containing natamycin (a polyene fungicide) which may be used against spoilage by mould, yeast or fungal growth (Abstract).

20. R1 discloses that the natamycin material may be used, as is, as a dry particulate anti-mycotic, or may be further processed as a dry preparation. The natamycin material may be further processed as a dry preparation by combining it with an anti-caking material to prevent powder agglomeration. Anti-caking materials suitable for this purpose may be cellulose powder, silicates, starches, clays, flours including rice flour, wheat flour, corn flour, polysaccharides, fibers and combinations thereof. (Page 4, paragraphs 27-28).

21. R1 teaches that the anti-caking material may be combined with the natamycin material at levels of from 0.001 to 99.999% of anti-caking material by weight. Most preferably the anti-caking material would be present at 0.1-10% by weight. (Page 4, paragraph 29)

22. R1 discusses that the natamycin may be applied to shredded cheese mixed with the anti-caking material. In this case the anti-caking material is serving the purposes of dispersing the natamycin and enhancing the flowability of shredded cheese. (page 4, paragraph 30). The quantity of the coating powder on the surface of the material being coated may vary depending on how the powder is applied.

23. R1 further teaches that the dry preparation of natamycin in anti-caking material may be dusted onto the perishable material using ordinary technology in the art. (Page 6, paragraph 39)

24. R1 presents data on the shelf life of shredded mozzarella cheese at refrigeration. The data indicate that the shredded cheese did not show any visible mould growth after 74 days of storage at 40F. (Page 8, Table 4)

25. Given that R1 discloses food product which has a coating of a powder comprising antifungal compound identical to that presently claimed, it is clear that the powder inherently provide a mould like appearance as presently claimed.

26. R1 is silent regarding the amount of coatings per surface area of the coated materials.

27. R2 discloses an antifungal coating comprising polyene fungicides such as natamycin suitable for the surface treatment of the products especially natural products and particularly food products such as cheese and sausage. These compositions may be used in a variety of applications including treatment of products by dipping and spraying (paragraph 17).

28. R2 teaches a dry antifungal composition wherein the active component is a polyene antifungal such as natamycin. Preferably the dry composition is an anhydrous composition most preferably a powder composition. (paragraph 21).

29. R2 gives examples of coating cheese blocks and depending on the xanthan gum content of the coating, the natamycin concentration could be 2-15 mg/dm<sup>2</sup>.

30. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of R1 using the concentrations as taught by R2 to preserve foods by coating them using a polyene antifungal such as natamycin in amount as presently claimed in order to effectively prevent mold. Absent any evidence to contrary and based on the teachings of the cited references, there would have been a reasonable expectation of success in making the coatings of the instant claims.

### ***Conclusion***

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References: US 3,050,401 (Process and composition for preservation and improved color retention of meats), GB 1,037, 799 (Improvements in or relating to cheese treating methods and apparatus and AU 734084 (Natamycin composition for shredded cheese) are all pertinent to the claims of the instant application in that all of them are making use of antifungal materials including natamycin for coating food products.



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32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-T 5:00 to 3:30 (Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr  
Examiner  
Art Unit 1794

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794